

**ASMR WA Scientific Symposium**  
Edith Cowan University

**WESTERN AUSTRALIA SHINES AS YOUNG RESEARCHERS GET TOGETHER TO PRESENT  
THEIR WORLD CLASS SCIENCE**

**Spicing up treatments for heart failure**

Patients that survive a heart attack often experience subsequent heart failure. A successful treatment is still required. Naviin Hardy and [researchers led by Professors Livia Hool and Killigudi Swaminathan-Iyer](#) at The University of Western Australia have been exploring the use of nanoparticles to deliver treatments that protect heart tissue against such damage. In animal models, they have demonstrated that cardiac outcomes following heart attack are improved by using nanoparticles to simultaneously deliver a peptide that [alters](#) calcium channel activity and the naturally occurring compound curcumin, a component of turmeric. The findings suggest that nanoparticle technology is an effective method for delivering drugs to the heart and could be more widely exploited in the prevention of heart failure.

**Being full of beans the secret to heart health**

Coffee consumption has been proposed to reduce cardiovascular disease risk, but exactly how this works remains unclear. Rujia Jiang and colleagues at the University of Western Australia have been studying the protective actions of polyphenols, and in particular a polyphenol called chlorogenic acid (CGA), which is abundant in coffee. Their research has shown that CGA can protect blood vessels against damage due to oxidants, supporting the view that coffee provides protection of the cardiovascular system. A good day to be a coffee drinker...!

**Bullying muscles back into action**

Duchenne Muscular Dystrophy (DMD) is a devastating, fatal muscle wasting disease affecting boys as young as 3. Jessica Terrill and colleagues at the University of Western Australia having been using a mouse model of DMD to study what causes the disease, and how it could be treated. One of their key findings is that wasting muscles in these mice are deficient in the essential amino acid taurine. By delivering taurine to DMD mice, they have observed an improvement in muscle function. These findings give rise to exciting new possibilities for the treatment of human patients with DMD

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